AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-29 (Canceled).

30. (New) A microfluidic system, comprising:

a first carrier flow supply line for supplying a first carrier flow with particles suspended therein,

a first carrier flow output line for withdrawing at least a part of the first carrier flow with the particles suspended therein,

a second carrier flow supply line for supplying a second carrier flow with particles suspended therein, and

a process chamber for examining, observing, manipulating and/or selecting the particles, wherein the first carrier flow supply line and the second carrier flow supply line open into the process chamber, and the first carrier flow output line is discharged out of the process chamber.

31. (New) The microfluidic system according to Claim 30, further comprising:

a first measuring station for examining the particles suspended in the first carrier flow, and

a second measuring station for examining the particles suspended in the second carrier flow.

32. (New) The microfluidic system according to Claim 31, wherein the first carrier flow and the second carrier flow run adjacent to one another in the process chamber at least in an examination area located upstream.

33. (New) The microfluidic system according to Claim 31, wherein the first measuring station is arranged in an examination area of the process chamber in an area of the first carrier flow whereas the second measuring station is arranged in the examination area of the process chamber in an area of the second carrier flow and adjacent to the first measuring station as regards a direction of flow.

34. (New) The microfluidic system according to Claim 32, wherein a dividing wall is arranged in the examination area of the process chamber between the first carrier flow and the second carrier flow, the dividing wall being impermeable for the particles and/or for the carrier flows.

35. (New) The microfluidic system according to Claim 32, wherein a dielectrophoretic field cage is arranged in the process chamber in order to fix the particles.

36. (New) The microfluidic system according to Claim 35, wherein the field cage is arranged downstream behind the first measuring station and the second measuring station.

37. (New) The microfluidic system according to Claim 35, wherein the field cage is arranged in the process chamber substantially in the middle between the two carrier flows.

38. (New) The microfluidic system according to Claim 35, wherein a selection unit is arranged in the direction of flow between the measuring stations and the field cage that selects certain particles from the first carrier flow and/or from the second carrier flow and supply lines them to the field cage.

39. (New) The microfluidic system according to Claim 35, further comprising a third measuring station for examining the particles fixed in the field cage.

40. (New) The microfluidic system according to Claim 30, wherein at least one centering unit that centers the particles is arranged in the first carrier flow supply line and/or in the second carrier flow supply line and/or in the process chamber.

41. (New) The microfluidic system according to Claim 30, wherein at least one holding unit that holds the particles is arranged in the first carrier flow supply line and/or in the second carrier flow supply line and/or in the process chamber.

42. (New) The microfluidic system according to Claim 30, wherein at least one second carrier flow output line is discharged from the process chamber.

43. (New) The microfluidic system according to Claim 42, wherein a sorting unit is arranged in a downstream area of the process chamber that sorts the particles into the first carrier flow output line or into the second carrier flow output line.

44. (New) The microfluidic system according to Claim 43, wherein the second carrier flow output line is discharged in a flow line behind the field cage from the process chamber and the second carrier flow output line is discharged from the processing chamber in a laterally offset manner.

45. (New) The microfluidic system according to Claim 44, wherein a third carrier flow output line is discharged from the process chamber, wherein the third carrier flow output line is discharged from the process chamber laterally offset opposite the flow line behind the field cage.

46. (New) The microfluidic system according to Claim 35, further comprising:

a selection unit arranged in the direction of flow between the measuring stations and the field cage that selects certain particles from the first carrier flow and/or from the second carrier flow and supply lines them to the field cage,

at least one centering unit that centers the particles and is arranged in the first carrier flow supply line and/or in the second carrier flow supply line and/or in the process chamber,

at least one holding unit that holds the particles and is arranged in the first carrier flow supply line and/or in the second carrier flow supply line and/or in the process chamber, and

a sorting unit arranged in a downstream area of the process chamber that sorts the particles into the first carrier flow output line or into a second carrier flow output line,

wherein the centering unit, the sorting unit, the selection unit or the holding unit has a dielectrophoretic electrode arrangement.

47. (New) The microfluidic system according to Claim 30, wherein a holding unit is arranged in at least one of the carrier flow output lines in order to intermediately store the particles in the output line.

48. (New) A cell fusioner comprising a microfluidic system according to Claim 30.

49. (New) A cell sorter comprising a microfluidic system according to Claim 30.

50. (New) An operational method for a microfluidic system according to Claim 1, said method comprising the following steps:

supplying of a first carrier flow with particles suspended therein by a first carrier flow

supply line into a process chamber of the microfluidic system,

examination, observation, manipulation and/or selection of the particles in the process chamber, and

discharging of at least a part of the first carrier flow with the particles suspended therein via a first carrier flow output line,

wherein at least a second carrier flow with particles suspended therein is supplied by a second carrier flow supply line into the process chamber.

51. (New) The operational method according to Claim 50, further comprising the following steps:

examination of the particles suspended in the first carrier flow, and

examination of the particles suspended in the second carrier flow.

52. (New) The operational method according to Claim 51, further comprising selecting the particles suspended in the first carrier flow or of the particles suspended in the second carrier flow as a function of the examination of the particles suspended in the first carrier flow and/or as a function of the particles suspended in the second carrier flow.

53. (New) The operational method according to Claim 52, further comprising fixing the selected particles in a dielectrophoretic field cage.

54. (New) The operational method according to Claim 53, further comprising examination of the particles fixed in the field cage.

55. (New) The operational method according to Claim 50, further comprising sorting the particles into one of several carrier flow output lines.

56. (New) The operational method according to Claim 55, wherein the sorting takes place as a function of the examination of the particles fixed in the field cage.

57. (New) The operational method according to Claim 50, wherein the examination of the particles suspended in the first carrier flow and/or the examination of the particles suspended in the second carrier flow and/or the examination of the particles fixed in the field cage comprise(s) a transmitted-light measuring and/or a fluorescence measuring.

58. (New) The operational method according to Claim 50, wherein the centering unit and/or holding unit arranged in the first carrier flow supply line on one hand and the centering unit and/or holding unit arranged in the second carrier flow supply line on another hand are controlled in a time-coordinated manner.